

Michigan

Science and Engineering Profile

	STATE	U.S.	Rank		STATE	U.S.	Rank
Doctoral scientists, 1995	12,724	453,928	12	Total R&D performance, 1995 (millions)	\$13,275	\$177,210	2
Doctoral engineers, 1995	3,306	86,738	8	Industry R&D, 1995 (millions)	\$12,388	\$130,332	2
S&E doctorates awarded, 1996	1,073	27,230	8	Academic R&D, 1996 (millions)	\$808	\$22,481	8
of which, in engineering	27%	23%		of which, in life sciences	54%	56%	
in life sciences	23%	25%		in engineering	19%	16%	
in social sciences	15%	15%		in social sciences	10%	5%	
S&E postdoctorates, 1996	1,167	37,019	8	Higher education current-fund expenditures, 1995 (millions)	\$6,252	\$182,602	8
S&E graduate students, 1996	16,875	430,631	9	Number of SBIR awards, 1990-1997	576	31,155	15
in doctorate-granting institutions				Patents issued to state residents, 1997	2,838	61,699	6
Population, 1997 (000s)	9,774	271,464	8	Gross state product, 1996 (billions)	\$263.3	\$7,677.4	9
Civilian labor force, 1997 (000s)	4,986	137,564	8	of which, agriculture	1%	2%	
Personal income per capita, 1997	\$25,560	\$25,598	19	manufacturing, mining, construction	32%	23%	
Federal spending				transportation, communication, utilities	7%	8%	
Total expenditures, 1997 (millions)	\$40,652	\$1,405,060	9	wholesale and retail trade	16%	16%	
R&D obligations, 1996 (millions)	\$706	\$66,087	22	finance, insurance, real estate	16%	19%	
				services	19%	20%	
				government	11%	12%	

Rankings and totals are based on data for the 50 states, D.C., and Puerto Rico.

Data on S&E postdoctorates and S&E graduate students include health fields.

Federal Obligations for Research and Development by Agency and Performer: Fiscal Year 1996

[Thousands of Dollars]

	Total	Federal Intramural	All FFRDCs	Industrial firms	Universities & Colleges	Other nonprofits	State & local government	State rank
Total, all agencies	705,915	96,297	0	159,054	404,199	43,081	3,284	22
Department of Agriculture	17,534	5,648	0	0	11,886	0	0	26
Department of Commerce	25,100	5,995	0	15,829	2,265	907	104	9
Department of Defense	250,190	77,425	0	117,213	32,757	22,795	0	23
Department of Energy	12,655	0	0	0	12,365	290	0	28
Dept. of Health & Human Services	273,659	893	0	9,346	252,541	9,006	1,873	12
Department of Interior	6,306	6,186	0	0	101	0	19	19
Department of Transportation	6,676	0	0	458	4,950	0	1,268	20
Environmental Protection Agency	17,002	0	0	11,018	4,448	1,536	0	6
Nat'l Aeronautics & Space Admin.	21,116	150	0	3,973	11,480	5,493	20	22
National Science Foundation	75,677	0	0	1,217	71,406	3,054	0	9
State rank	22	24	na	24	9	14	14	

Federal R&D obligations are as reported by funding agencies.

FFRDC = federally funded research and development center

SBIR = small business innovation research

na = not applicable